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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,635	07/15/2003	Klaus R. Moeller	23390-000120/US	5657

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EXAMINER

FAULK, DEVONA E

ART UNIT PAPER NUMBER

2615

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/618,635	Applicant(s) MOELLER ET AL	
	Examiner Devona E. Faulk	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-35 and 37-42 is/are rejected.
- 7) ☒ Claim(s) 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/28/2006 has been entered.

Response to Remarks

2. The applicant has cancelled previously presented claims 1-22 and added newly recited claims 23-42. Applicant's arguments with respect to prior art Orfield and Anderson have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 25,27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 25 recites "wherein the control unit is configured to selectively combine a sound masking signal and a paging signal, and output on one of the plurality of output signal channels". The specification teaches that the audio signal may comprise a sound-masking signal or a sound-masking signal

combined with a paging signal in paragraph 11, but the examiner did not see where the specification disclosed that the control unit is configured to selectively combine the signals. Claim 27 recites "wherein the control unit is configured to generate the control signal to identify at least one of the sound masking units and to indicate from which of the output signal channels the identified sound masking unit is to obtain a signal for output". The specification in paragraph 0049 teaches that the control unit configures the network by assigning identities or addresses to each of the master hubs but this does not read on the claim language as recited.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 23-24, 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (US 4185167) in view of Andersen et al. (US 5406634).

Regarding claim 23, Cunningham discloses a networked sound masking system (Figs. 3 and 5), comprising:

a communication network (Figure 5; column 6, lines 26-37);

a plurality of sound masking units (M)(Fig. 5; column 6, lines 26-37), each sound masking unit connected to the communication network, each sound masking unit

configured to selectively output a signal from at least one of a plurality of output signal channels carried over the communication network (Fig. 3; column 4, lines 1-18).

Cunningham does not expressly disclose each sound masking signal generator configured to generate and output a sound masking signal based on a control signal carried over a control signal channel of the communication network; and a control unit configured to selectively output at least one sound masking signal on the plurality of output signal channels of the communication network, and the control unit configured to generate the control signal and output the control signal on the control signal channel of a communication network.

Anderson discloses an intelligent speaker unit for speaker system network comprising a plurality of speaker units (i.e. sound masking units), wherein the plurality of speaker units are controlled by control data transmitted to the plurality of speaker units over a control channel (column 2, lines 43-54); and a control unit (Fig. 1; column 2, lines 55-64; column 3, lines 33-62) configured to generate the control signals to selectively control operation of the plurality of speaker units, and configured to send the control signals over the communication network (Fig. 1; column 2, lines 20-68; column 3, lines 33-62) in order to allow an operator to remotely control the plurality of speaker units, which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all

speakers in a network or zone (Figs. 1 and 7; column 2, lines 20-68; column 3, lines 33-62).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cunningham with the teaching of Anderson to incorporate the functions of a intelligent speaker unit for use in a speaker network system (such as the speaker network system of Cunningham)(Cunningham, Fig. 5) in order to allow an operator to remotely control the plurality of speaker units (i.e. sound masking units), which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone. Therefore Cunningham as modified discloses each sound masking signal generator configured to generate and output a sound masking signal (Cunningham, Fig. 3; column 4, lines 1-18) based on a control signal received over the communication network (i.e. the sound masking package of Cunningham receives control data from the control unit of Anderson in order for each sound masking signal generator of Cunningham to be remotely controlled by the control unit of Anderson in order for each sound masking signal generator configured to generate and output a sound masking signal based on a control signal received over the communication network) (Cunningham, Fig. 5; Anderson, column 3, lines 56-62); and a control unit configured to generate the control signals to selectively control operation of the plurality of sound masking units, and configured to send the control signals over

the communication network (Anderson, Figs. 1 and 7; column 2, lines 20-68; column 3, lines 33-62).

Regarding claim 24, Cunningham as modified by Anderson discloses wherein the control unit is configured to receive at least one paging signal, and output the paging signal on one of the plurality of output signal channels. Cunningham discloses that the sound masking system can provide paging signals. Anderson teaches that the control unit, 10, can transmit and receive signals. All elements of claim 24 are comprehended by the rejection of claim 23.

All elements of claim 26 are comprehended by the rejection of claim 23 (see Anderson Figure 1).

Regarding claim 28, Cunningham as modified by Anderson discloses wherein the plurality of sound masking units are connected in a series in the communication network (Cunningham, Figure 5).

Regarding claim 29, Cunningham as modified by Anderson discloses each of the plurality of sound masking units includes a first interface and a second interface, the first interface interfacing with an upstream side of the communication network, and the second interfacing with a downstream side of the communication network, the upstream side being closer to the control unit and the downstream side being further from the control unit (Cunningham, Fig. 5; Anderson, Fig. 1).

Regarding Claim 30, Cunningham as modified by Andersen discloses the plurality of sound masking units populates the plurality of output signal channels such that the plurality of sound masking units are associated with a plurality of sound masking zones, each sound masking unit being associated with one of the plurality of sound masking zones, and the sound masking units providing sound masking for the associated sound masking zone independently of the other sound masking zones (i.e.

Cunningham as modified comprising control data which enables the control of the desired sound masking package or packages in order to perform the desired functions)(Cunningham, Fig. 5; Anderson, Fig. 1; column 4, lines 33-57).

Regarding Claim 31, Cunningham as modified by Andersen discloses wherein the control unit populates the plurality of output signal channels such that the sounds masking units associated with each sound masking zone provide sound masking tailored to suppress sound in the associated sound masking zone (Cunningham, Fig. 1, column 1, lines 35-68).

Regarding Claim 32, Cunningham as modified by Andersen does not expressly disclose a number of the plurality of sound masking units is different from a number of the plurality of sound masking zones. However, the Examiner takes Official Notice that it is well known in the art to provide a number of the plurality of sound masking units is different from a number of the plurality of sound masking zones in order to provide the desired configuration needed for different areas which produces a comfortable listening environment for people. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cunningham as modified to provide a number of the plurality of sound masking units is different from a number of the plurality of sound masking zones in order to provide the desired configuration need for different areas which produces a comfortable listening environment for people, wherein the control unit of Cunningham as modified can selectively control the sound masking package or packages in a network, or in multiple networks or zones to perform the desired operations.

Regarding claim 33, Cunningham as modified by Andersen wherein discloses the control unit includes an address generator for assigning addresses to the sound masking units (Anderson, column 7, lines 10-23).

Regarding claim 34, Cunningham as modified by Andersen discloses wherein the address generator comprises a component for generating a logical address for each of the sound masking units (i.e. it is implicit that Cunningham as modified discloses a component for generating a logical address for each of the sound masking units). Cunningham as modified does not expressly disclose the logical address being derived from an identifier associated with each of the sound masking units. However, the Examiner takes Official Notice that it is well known in the art to provide logical address being derived from an identifier associated with each of the sound masking units in order to derived an address for the sound masking unit which it unique to that sound masking unit which was provided by the manufacturer so that the control unit does not have to generate a random address for the sound masking unit, therefore providing a fixed address which makes process of generating an address simpler. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Cunningham as modified to provide logical address being derived from an identifier associated with each of the sound masking units in order to derived an address for the sound masking unit which it unique to that sound masking unit which was provided by the manufacturer so that the control unit does not have to generate a random address for the sound masking unit, therefore providing a fixed address which makes process of generating an address simpler.

7. Claim 35,37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (US 4185167) as applied to claim 21 above and Andersen et al. (US 5406634) as applied to claim 1 above in view of Hendricks et al. (US 2003/0107478).

Regarding claim 35, Cunningham as modified by Andersen fails to explicitly disclose that each of the sound masking units includes a first control component and a second control component, the first control component being selectively responsive to the control signals for controlling characteristics of the sound masking signal, and the second control component being selectively responsive to the control signals for controlling characteristics of the paging signal. Hendricks discloses a sound masking system having speakers that include a controller which provides for controlling characteristics of a sound masking signal and a paging signal (Figure 5, page 6, paragraph 0050). It would have been obvious to modify Cunningham as modified by Andersen so that each masking unit has a first and second control component selectively responsive to control signals for controlling characteristics of the sound masking signal and the paging signal respectively as taught by Hendricks in order to provide an integrated masking and paging system.

Regarding claim 37, Cunningham as modified by Andersen and Hendricks discloses the controllable characteristics of the sound masking signal include a variable contour characteristic.

Regarding claim 38, Cunningham as modified by Andersen and Hendricks discloses the controllable characteristics of the sound masking signal include a variable gain characteristic (Cunningham, Fig. 3; column 4, line 29 to column 5, lines 16; column 5, lines 39-66; Anderson, Figs. 1-2 and 4-7).

Regarding claim 39, Cunningham as modified by Andersen and Hendricks discloses the controllable characteristics of the sound masking signal include a variable frequency characteristic (Cunningham, Fig. 3; column 4, line 29 to column 5, lines 16; column 5, lines 39-66; Anderson, Figs. 1-2 and 4-7).

Regarding claim 40, Cunningham as modified by Andersen and Hendricks discloses the controllable characteristics of the sound masking signal include a volume characteristic (Cunningham, Fig. 3; column 4, line 29 to column 5, lines 16; column 5, lines 39-66; Anderson, Figs. 1-2 and 4-7).

Regarding Claim 41, Cunningham as modified by Andersen and Hendricks discloses further comprising: a remote control unit configured to send adjustment signals wirelessly to the control unit; and wherein the control unit is configured to receive the adjustment signals and generate the control signals based on the received adjustment signals (Anderson, Figs. 1-2 and 7; column 3, lines 33-48; column 5, lines 1-11).

Regarding Claim 42, Cunningham as modified by Andersen and Hendricks does not disclose the remote control unit is configured to receive sound measurements and generate the adjustment signals based on the received sound measurements. However, the Examiner takes Official Notice that it is well known in the art to provide the remote control unit which is configured to receive sound

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measurements and generate the adjustment signals based on the received sound measurements in order to make precise adjustments to the sound masking units based on the measurements received by the remote control. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cunningham as modified to provide the remote control unit (i.e. remote unit of Anderson which allows an operator at the sound masking unit to use an optional controls/display. Transceiver 47 is provided with return line 26, whereby the remote control 41 and the central computer 10 might exchange control information or status, which allows the remote console and the central computer to communicate remotely which provides ease of adjusting a plurality of parameters to obtain the desired output at a desired time) which is configured to receive sound measurements and generate the adjustment signals based on the received sound measurements in order to make precise adjustments to the sound masking units based on the measurements received by the remote control (Anderson, column 5, lines 1-11)

Claim Objections

8. Claim 36 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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